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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/665,837	09/18/2003	Jeffrey L. Conroy	902.0137.U1(US)	6742

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EXAMINER	
ANGEBRANNDT, MARTIN J	

ART UNIT	PAPER NUMBER
1756	

DATE MAILED: 06/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/665,837	CONROY ET AL.	
	Examiner	Art Unit	
	Martin J. Angebranndt	1756	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *1/16/04,7/26/04, 12/14/05*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-47* is/are pending in the application.

4a) Of the above claim(s) *30-43 and 47* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29 and 44-46* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-47* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *1/16/04,7/26/04, 12/14/05*
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-29 and 44-46, drawn to apparatus for coating and exposing compositions including a masking element and sources for two different wavelengths, classified in class 430, subclass 347.

II. Claim 41-43, drawn to a computer program for controlling exposure apparatus as stored on a medium, classified in class 700, subclass 117.

III. Claims 30-40 and 47, drawn to methods for applying a coating, curing the coating and imaging the coating, classified in class 430, subclass 269.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions group I and group II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, subcombination has separate utility such as the apparatus of group I may be used to cure other compositions, which do no form colored images, but are otherwise photosensitive to two wavelengths. See MPEP § 806.05(d).

3. Inventions group III and group I are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus of group I may be used to cure other compositions, which do no form colored images, but are otherwise photosensitive to two wavelengths.

4. Inventions group III and group II are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another and materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the instructions of group II may be used with these composition applied to other substrate or with other compositions have similar photosensitivities.

5. Because these inventions are independent or distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter and different classification, restriction for examination purposes as indicated is proper.

6. During a telephone conversation with Harry F. Smith (32,493) on June 16, 2006, a provisional election was made without traverse to prosecute the invention of group I, claims 1-29 and 44-46. Affirmation of this election must be made by applicant in replying to this Office action. Claims 30-43 and 47 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

7. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

8. The examiner would like to point out that it has been held in the courts that the "applicant has [an] obligation to call the most pertinent prior patent to [the] attention of [the] Patent Office in a proper fashion." [Penn Yan Boats, Inc. V. Sea Lark Boats, Inc., et al. 175 USPQ 260 (DC

SFla 1972)]. The examiner would appreciate the applicant identifying why the cited reference is pertinent to the claimed optical recording media including relevant portions of the document cited.

The applicant should be wary of submitting prior art, which has limited bearing on the issues at hand.

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claims 1,2,5-17,20,22-29 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Ohkuma et al. EP 487086.

Ohkuma et al. EP 487086 teaches in example1, the coating of a photosensitive solution which includes both free radical and cationic photocuring systems and which differ in spectral sensitization. A protective layer is applied to this and a 488 nm laser used to record the

holographic image (which is visible and replays in the green), followed by an exposure using a 500 W Xe lamp.

The current language in claim 1, begins by introducing "a unit for ....". Therefore the limitations of most of the dependent claims are considered intended use at this time. The examiner suggests the applicant introducing - - a coating composition comprising at least one photosensitive materials - - and - - an optical medium with embossed data- - before "A unit for ...." In claim 1 and other similar amendments to the other dependent claims. another alternative is to recited the fully structure of the optical recording medium with embossed data and the layer already applied and concentrate on the exposure apparatus, leaving out the coating apparatus. The recitation of embossed data would embrace ROM and recordable media (having embossed data, for tracking or address information as is common) and would serve the applicant well in distinguishing over the prior art.

The limitation of claim 16, has been read broadly to embrace recording of information which may have been on another photosensitive materials previously. The claims do not require that the optical medium being reproduced be a digital format media, such as a DVD or the like.

12. Claims 1,2,5-17,20 and 22-29 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Ueda et al. '066.

Example 3 coats a green sensitive layer, an interlayer and a red sensitive layer. These are exposed using the appropriate lasers. (10/55-11/5). Examples 10 records a holograms using a 514 nm laser exposure and follows this with a UV curing exposure. The use of three different sensitized layers is disclosed with respect to figure 7a. The optical systems in figure 5 shows the use of three different lasers. (15/57-67)

The examiner notes that a colored image (due to the interference fringes) is formed.

13. Claims 1,2,5-17,20, 22-29 and 44-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda et al. '066.

It would have been obvious to one skilled in the art to form the medium of example 3 with the blue layer added as shown in figure 7a using three different lasers to form the respective images with the advantage of forming a full color image (RGB)

14. Claims 1,2,5-17,20 and 22-29 and 44-46 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Sakojiri et al. '367.

See example 4 which has three differently sensitized microcapsules in a single layer and different lines from a carbon dioxide laser is used to perform the separate exposures. These include leuco dyes.

15. Claims 1-17,19 and 22-29 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Seaki et al. '373.

See example 1, where two differently sensitized microcapsules are formed in the recording layer and a filtered mercury lamp is used to recording data using 400+ nm and another filter is used to record data using wavelengths of 400 nm or less. (col .8) These include leuco dyes.

16. Claims 1,5-17,20 and 22-29 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Iwai et al. EP 0720053.

See example 1, where the composition is coated and an argon ion laser is used to direct write the pattern and a UV mercury lamp to provide a final cure. These include leuco dyes.

The embodiments where the light sources are U&V lamps are accorded a date of June 6, 2002, while the embodiments where one of the sources is a laser (non-UV) are accorded the later date of September 19, 2003.

17. Claims 1,5-17,18,20 and 22-29 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Iwai et al. '746.

See example 1, where the composition is spin coated and an argon ion laser is used to direct write the pattern and a UV mercury lamp to provide a final cure. These include leuco dyes.

18. Claims 1-17,19-20 and 22-29 and 44-46 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Gaudinana et al. '118.

See the coating and exposure using three wavelengths at 30/54-34/29, where the compositions are coated and either three lasers or three masking steps each of which occur at 450, 400 and 350 nm are used to direct write the pattern. (three sources). Examples 6 uses a 360 nm exposure through a filter source and a 440 nm exposure of a filtered Xenon arc (39/44-40/61). These include leuco dyes.

19. Claims 1-29 and 44-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gaudinana et al. '118, in view of Iwai et al. '746 and/or Patel et al. '820.

Patel et al. '820 teach the use of an LCD mask, which is programmable to perform color separation exposures, which reduces the alignment issues. (2/60-64). The use of the electrically controllable mask is color changing systems is disclosed. (2/65-3/16). The possibility of altering the image during the exposure as a means for compensation is disclosed. (4/14-27).

It would have been obvious to one skilled in the art to modify the process of Gaudinana et al. '118 by using other coating techniques, such as spin coating taught by Iwai et al. '746 as useful with leuco dye based compositions with a reasonable expectation of success and/or to use a single electronically driven LCD mask in place of the three masks described in column 33 at line 26, with a reasonable expectation of gaining the advantages ascribed to this by Patel et al. '820.

20. Claims 1,2 and 5-29 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Krasulak WO 99/65696.

Krasulak WO 99/65696 describes a CD coated with an ink using spin coating, a, LCD mask is then used to mask 780 nm radiation, which colors the ink in the exposed area and this is followed by a UV exposure at 308 nm to cure the entire layer and fix the image. (3/22-38). This is described for a negative mask and may be preformed suing a series of applications of colorless inks which develop cyan, magenta, yellow and black images upon the imaging exposure. This may be images, decoration and may include watermarks, (5/11-21). The use of CD burners with this is disclosed (5/8-10).

21. Claims 1-29 and 44-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krasulak WO 99/65696, in view of Gaudinana et al. '118

It would have been obvious to one skilled in the art to modify the process disclosed by Krasulak WO 99/65696 by using composition which cooler using the influence of different colors of light, rather than all being sensitive to the same wavelength, this would allow the formation of multicolored images through the LCD mask without needing to register the image after each coating step and the final UV cure would work for all the layers

22. Claims 1-29 and 44-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Krasulak WO 99/65696, in view of Gaudinana et al. '118, further in view of Grossa DE 4240141.

Grossa DE 4240141 teaches the use of leuco dye compositions which are exposed in the visible to form an image, followed by UV curing exposure.

In addition to the basis provided above, the examiner cites Grossa DE 4240141 to establish the use of leuco dyes, which are colorized using visible light, in UV curable compositions to support the position of obviousness above where the use of laser or filter light in the visible and near UV to form the images followed by a cure using deeper UV and thereby establish a basis for the assemblage of lamps recited in the claims and rendered obvious by the combination.

23. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Chen et al. '809, Leuschner et al. '901 and Goel '918 teaches photoresist exposure apparatus using plural wavelengths.

Hayashibara et al. '715, Niimoto et al. JP 05-162450, Hayashibara et al. JP 06-210946 and Hayashibara et al. JP 09-290567 teaches UV curable compositions containing leuco dyes which are laser marked and then UV cured.

Lawandy et al. '562 is the prepub of the parent application.

24. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin J. Angebranndt whose telephone number is 571-272-1378. The examiner can normally be reached on Monday-Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Martin J Angebranndt
Primary Examiner
Art Unit 1756

06/19/2006